AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An analysis system for ~~analysing~~ analyzing data from a monitoring system for monitoring at least one characteristic of a dynamic system, said monitoring system providing characteristic data in respect of the dynamic system, the dynamic system having at least one known normal state, the analysis system comprising:

first input means for receiving characteristic data from the monitoring system indicative of a state of the dynamic system;

second input means for receiving confirmation information from an operator in the event that said operator considers the dynamic system to be in a known normal state, said confirmation information being associated with said characteristic data, and said confirmation information indicating that said operator considers ~~when~~ the dynamic system ~~is~~ to be in a known normal state;

normality modelling means arranged to derive a normality model in response to received characteristic data and confirmation information, the normality model comprising data indicative of one or more known normal states;

prediction generating means arranged to predict future characteristic data from data in the normality model;

difference function providing means arranged to provide a difference function, said difference function being indicative of an acceptable difference between predicted future characteristic data and received characteristic data; and

comparison means arranged to compare predicted future characteristic data with received characteristic data in conjunction with the difference function, and to produce an abnormality signal if the difference between the predicted future characteristic data and the received characteristic data exceeds the difference function.

2. (Currently Amended) An analysis system for ~~analysing~~ analyzing data from a monitoring system for monitoring at least one characteristic of a dynamic system, said monitoring system providing characteristic data in respect of the dynamic system, the dynamic system having at least one known normal sequence of states, the analysis system comprising:

first input means for receiving characteristic data from the monitoring system indicative of a state of the dynamic system;

second input means for receiving confirmation information from an operator in the event that said operator considers the dynamic system to be in a known normal state, said confirmation information being associated with said characteristic data, and said confirmation information indicating that said operator considers ~~when~~ the dynamic system proceeds according to a known normal sequence of states;

normality modelling means arranged to derive a normality model in response to received characteristic data and confirmation information, the normality model comprising data indicative of one or more known normal sequences of states;

prediction generating means arranged to predict future characteristic data from data in the normality model;

difference function providing means arranged to provide a difference function, said difference function being indicative of an acceptable difference between predicted future characteristic data and received characteristic data; and

comparison means arranged to compare predicted future characteristic data with received characteristic data in conjunction with the difference function, and to produce an abnormality signal if the difference between the predicted future characteristic data and the received characteristic data exceeds the difference function.

3. (Previously Presented) An analysis system according to claim 1, wherein the difference function providing means provides a predetermined difference function.

4. (Currently Amended) An analysis system according to claim 1, wherein the difference function providing means comprises difference function deriving means for deriving a

difference function from received characteristic data and ~~the~~ presence or absence of confirmation information.

5. (Previously Presented)   An analysis system according to claim 1, wherein the difference function providing means comprises difference function updating means for updating the difference function if confirmation information that the dynamic system is in a normal state is received from an operator in response to an abnormality signal.

6. (Previously Presented)   An analysis system according to claim 1, wherein the difference function providing means uses fuzzy logic.

7. (Previously Presented)   An analysis system according to claim 1, wherein the normality modelling means comprises normality model updating means for updating the normality model in response to received characteristic data and the presence or absence of confirmation information from an operator.

8. (Previously Presented)   An analysis system according to claim 1, wherein the normality model is a fuzzy system.

9. (Previously Presented)   An analysis system according to claim 1, further comprising:

abnormality state storage means for storing data indicative of one or more known abnormal states; and

abnormality comparison means for comparing received characteristic data with data in the abnormality state storage means, and producing an abnormality signal if the received characteristic data matches the data in the abnormality state storage means.

10. (Currently Amended)   A method of ~~analysing~~ analyzing data from a monitoring system monitoring at least one characteristic of a dynamic system and providing characteristic data in respect thereof, the dynamic system having at least one known normal state, the method comprising the steps of:

receiving characteristic data from the monitoring system indicative of a state of the dynamic system;

receiving confirmation information from an operator in the event that said operator considers the dynamic system to be in a known normal state, said confirmation information being associated with said characteristic data, and said confirmation information indicating that said operator considers when the dynamic system is to be in a known normal state;

deriving a normality model in response to received characteristic data and confirmation information, the normality model comprising data indicative of known normal states;

predicting future characteristic data in response to data in the normality model;

providing a difference function, said difference function being indicative of an acceptable difference between predicted future characteristic data and received characteristic data;

comparing predicted future characteristic data with actual received characteristic data in conjunction with the difference function; and

producing an abnormality signal if the difference between the predicted future characteristic data and the actual received characteristic data exceeds the difference function.

11. (Currently Amended)   A method of analysing analyzing data from a monitoring system monitoring at least one characteristic of a dynamic system and providing characteristic data in respect thereof, the dynamic system having at least one known normal sequence of states, the method comprising the steps of:

receiving characteristic data from the monitoring system indicative of a state of the dynamic system;

receiving confirmation information from an operator in the event that said operator considers the dynamic system to be in a known normal state, said confirmation information being associated with said characteristic data, and said confirmation information indicating that said operator considers when the dynamic system proceeds according to a known normal sequence of states;

deriving a normality model in response to received characteristic data and confirmation information, the normality model comprising data indicative of known normal sequences of states;

predicting future characteristic data in response to data in the normality model;

providing a difference function, said difference function being indicative of an acceptable difference between predicted future characteristic data and received characteristic data;

comparing predicted future characteristic data with actual received characteristic data in conjunction with the difference function; and

producing an abnormality signal if the difference between the predicted future characteristic data and the actual received characteristic data exceeds the difference function.